

Product Evaluation

SHU144 | 0521

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: SHU-144

Effective Date: May 1, 2021

Re-evaluation Date: May 2025

Product Name: ES 55 SUP End Retention Aluminum Roll Up Shutters, Impact Resistant

Manufacturer: Croci North America
11600 Adelmo Lane
Suite 1
Fort Myers, FL 33966
(800) 951-1195

General Description:

The ES 55 SUP roll up shutters are manufactured from extruded aluminum. The roll up shutters are assembled using interlocking extruded aluminum slats. The major components of the roll up shutter system are as follows:

Slat 1 (ES55 SUP): 55 mm slats manufactured from 6063-T6 aluminum alloy. The slat size is 2.52" x 0.52".

Slat 1A (ES55 LEX): 55 mm slat manufactured from 6063-T6 aluminum alloy with Lexan insert. The slat size is 2.52" x 0.52", and the Lexan insert is 0.875" x 0.093".

End Slat: TE14X56U end slat is extruded from 6063-T6 aluminum alloy. The slat measures 2.52" x 0.55".

Aluminum Side Rails: Manufactured from 6063-T6 aluminum. The aluminum side rails are 3.150" in length and 1.150" in depth.

Aluminum Tubes: Manufactured of 6063-T6 aluminum. The tubes are 3" x 3" or 3" x 2". The wall thickness is 0.13".

Mullion Tubes: Manufactured of 6063-T6 aluminum. The mullions are 4" wide. The mullions are available in 4", 6" and 8" depths. The wall thickness is 0.25".

Mullion Clip Angle: Manufactured of 6063-T6 aluminum. The mullion clip angle is 2" x 2" x 0.25". The mullion clip angle is used to secure each end of the mullion to the structure.

Limitations:

Design Drawings: "ES 55 SUP Extruded Aluminum Roll-Up Shutter," Drawing No. 19-070.1, sheets 1 through 11 of 11, dated April 21, 2020, and signed and sealed by Pedro Figueiredo, P.E. on April 21, 2020. The stated drawings will be referred to as "approved drawings" in this evaluation report. A copy of the approved drawings shall be available at the job site

Wall Construction: The shutters may be mounted to the following types of wall framing:

- Pre-cast concrete, cast-in-place concrete (minimum compressive strength required specified in drawings)
- Grout-filled concrete masonry units (CMU); (minimum compressive strength required specified in drawings)
- Wood (minimum Southern Yellow Pine dimension lumber, S.G.=0.55)
- Steel (minimum A36, 1/8" thickness)
- Aluminum (minimum 6063-T6, 1/4" thickness)

Mounting Configurations: The shutters may be mounted directly to the outside of the wall opening (see page 4 of 11 of the approved drawings); mounted inside the wall opening using aluminum tubes (see pages 5 and 6 of 11 of the approved drawings); and built-out from the outside of the wall opening using aluminum tubes (see pages 7 and 8 of 11).

Span Configurations: The shutters can be installed as a single span configuration or a multiple span configuration. Multiple span configurations require a vertical mullion.

Design Pressure Rating: The design pressure rating for the roll up shutters is dependant on several factors, including the span, the mounting condition, and the mullion span. Refer to the approved drawings to determine the allowable design pressure rating for the shutter assembly based on the configuration of the roll-up shutter assembly used. In no case shall the design pressure rating exceed +/-120 psf.

Maximum Spans: The maximum allowable spans are specified on page 1 of 11. In no case can the span exceed 287-1/16".

Maximum Mullion Height: The maximum allowable vertical mullion height is specified in a table on page 9 of 11 of the approved drawings.

Minimum Separation from Glass: The minimum glazing separation requirements are specified in the approved drawings. The shutters may not be installed below a height of 30 feet on essential facilities as defined in ASTM E 1996-14a.

Product Identification: The shutter assemblies have a manufacturer-produced label that indicates the manufacturer (Croc North America); the name of the product (Croc Extruded Roll Up Slat ES/55 SUP); the TDI Evaluation Report number (SHU-144); the missile level (Missile Level D); the design pressure and installation are in accordance with Drawing 19-070; and the test standards: ASTM E 330-02, ASTM E 1886-04, and ASTM E 1996-04.

Compliance: The shutters comply with ASTM E 330-14, ASTM E 1886-13a, and ASTM E 1996-14a.

Impact Resistance: This shutter assembly satisfies the TDI criteria for protection from windborne. The shutters passed Missile Level D specified in ASTM E 1996-14a. The assembly may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded. The shutters may not be installed below a height of 30 feet on essential facilities as defined in ASTM E 1996-14a.

Installation:

General Installation Requirements: The shutters must be installed in accordance with the manufacturer's installation instructions, the approved drawings, and this product evaluation report. Copies of the approved drawings must be available on the jobsite during inspection of the shutter assembly.

Anchorage: The shutters must be anchored to the structure in accordance with the approved drawings.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.